

Appl. No. 09/982,278
Amdt. Dated September 14, 2005
Reply to Office Action of 8/14/05

Docket No. CM01969G
Customer No. 22917

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A collision mitigation method used in a communication system, the method comprising the steps of:
in a given transmission pass, estimating a signal from a first source device that has been received over a first code channel;
determining, based on a code channel selection method that uses predetermined information, a set of code channels that the signal from the first source device will be received over in at least one subsequent transmission pass; and
based on the steps of estimating and determining, removing the signal from the first source device from a received signal comprising plurality of signals received-transmitted from a plurality of source devices over a second code channel, wherein the second code channel is included in the determined set of code channels.
2. (currently amended) The method of claim 1 wherein the step of estimating comprises estimating a received signal strength of the signal from the first source device.
3. (original) The method of claim 1 wherein the step of estimating utilizes error correction coding.
4. (original) The method of claim 1 wherein the steps of claim 1 are repeatedly performed until all signals are determined.
5. (currently amended) The method of claim 1 wherein the signal from the first source device represents at least a portion of predetermined data stored on a the first source device.

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6. (currently amended) The method of claim 1 wherein the first code channel and the second code channel are the same.
7. (currently amended) The method of claim 1 wherein the first code channel and the second code channel are different.
8. (currently amended) The method of claim 1 wherein the first code channel is orthogonal to the second code channel.
9. (currently amended) The method of claim 1 wherein the first code channel is quasi-orthogonal to the second code channel.
10. (currently amended) A collision mitigation method used in a multiple transmission pass communication system, the method comprising the steps of:
in a given transmission pass, estimating a signal from a first source device that has been received over a first code channel;
determining, based on a code channel selection method that uses predetermined information, a set of code channels that the signal from the first source device was ~~and will be~~ received over in at least one prior transmission pass and will be received over in at least one subsequent transmission pass passes; and
based on the steps of estimating and determining, removing the signal from the first source device from a received signal comprising plurality of signals received transmitted from a plurality of source devices over a second code channel, wherein the second code channel is included in the determined set of code channels.
11. (currently amended) The method of claim 10 wherein the signal from the first source device is removed from at least one of a prior transmission pass and a subsequent transmission pass.

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12. (currently amended) The method of claim 10 further comprising the step of storing all signals received over their respective code channels in each transmission pass.

13. (currently amended) The method of claim 10 wherein in each transmission pass, a plurality of source devices transmit their respective signals over their selected code channels to a common destination device.

14. (original) The method of claim 10 wherein the step of estimating utilizes error correction coding.

15. (original) The method of claim 10 wherein the steps of claim 10 are repeatedly performed until all signals are determined.

16. (currently amended) A collision mitigation method used in a communication system, the method comprising the steps of:

receiving a signal from a first source device over a first code channel in a first transmission pass;

determining, based on a code channel selection method that uses predetermined information, a set of code channels that the signal from the first source device will be received over in at least one subsequent transmission pass; and

based on the steps of determining, estimating a total number of signals-source devices in the system based on at least the signal from the first source device a number of known signals and a number code channels each having colliding signals from at least two source devices of colliding signals.

17. (currently amended) The method of claim 16 wherein the steps of claim 16 are repeatedly performed until the number a number of known signals source devices is equal to the estimated total number of source devices-signals.

18. (original) The method of claim 16 wherein the steps of claim 16 are repeatedly performed until a predetermined confidence level is obtained.

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19. (currently amended) A method comprising the steps of:
- receiving a signal over a code channel;
 - estimating a variance of an absolute value of the signal; and
 - based on the step of estimating, determining that a collision between at least two source device transmissions has occurred on the code channel when the estimated variance exceeds a predetermined threshold.
20. (original) The method of claim 19 wherein the predetermined threshold is derived from a mean of the absolute value of the signal.